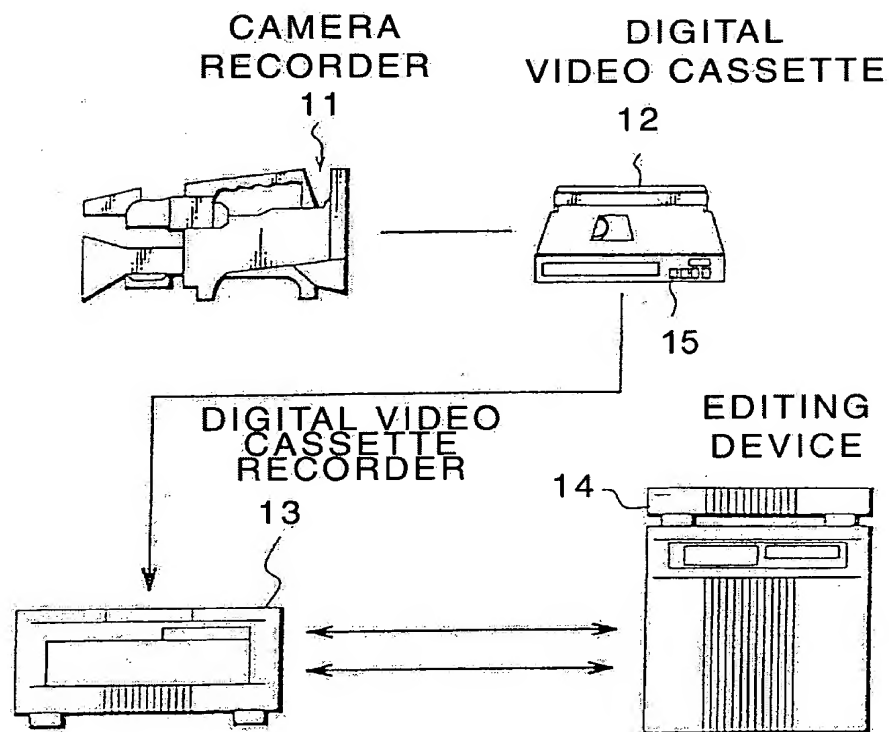




**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

1/33

FIG. 1

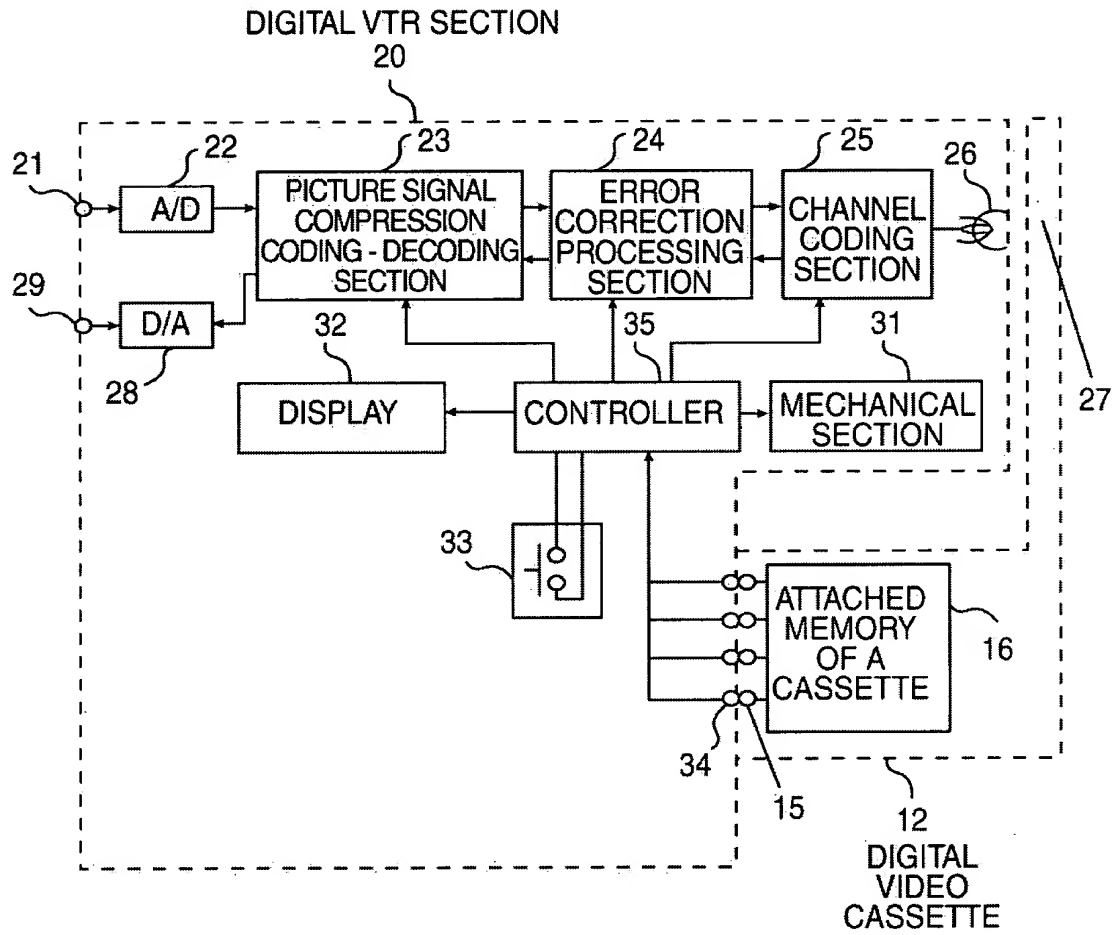




**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

2/33

FIG. 2





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

3/33

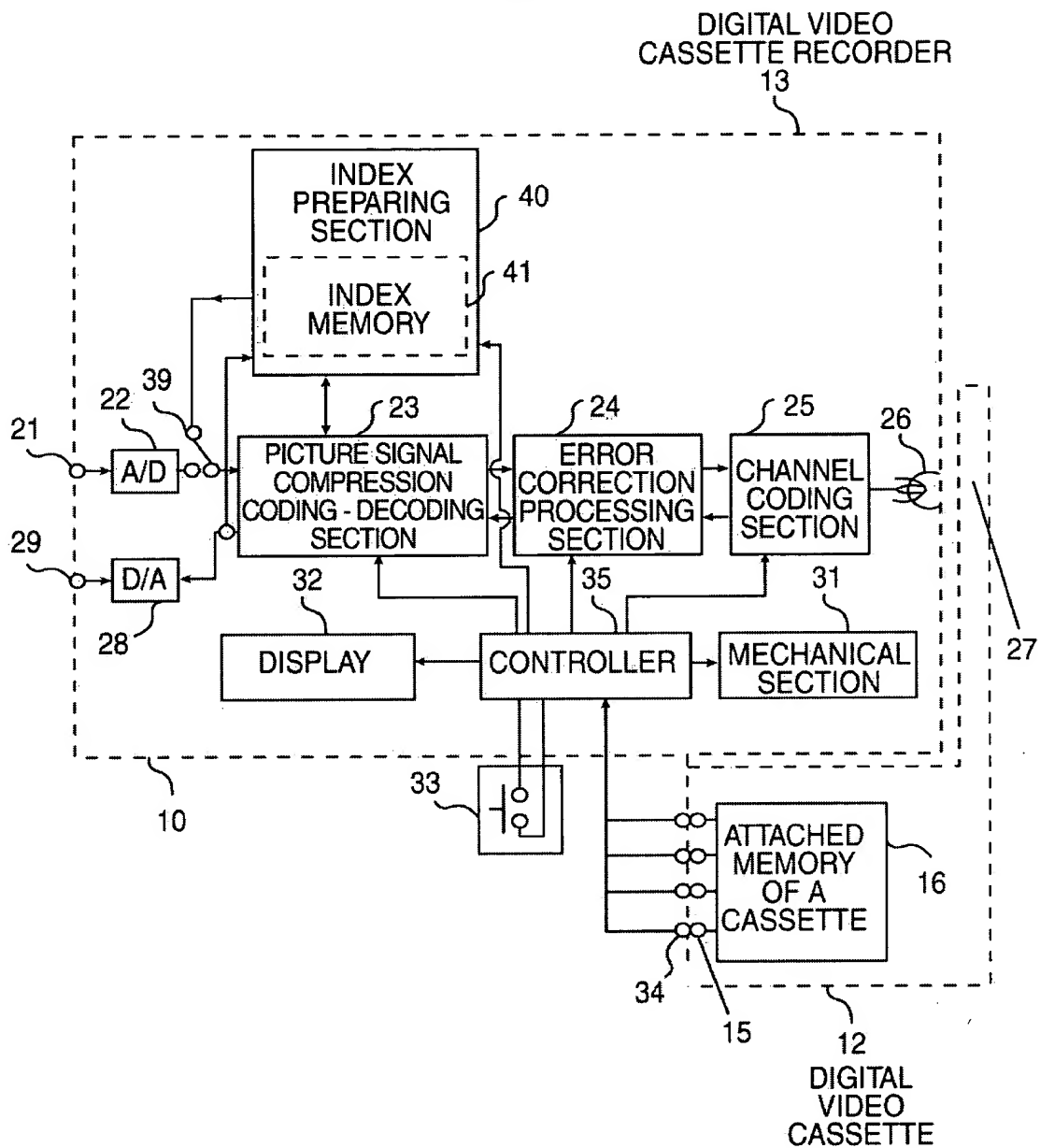


FIG. 3



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

4/33

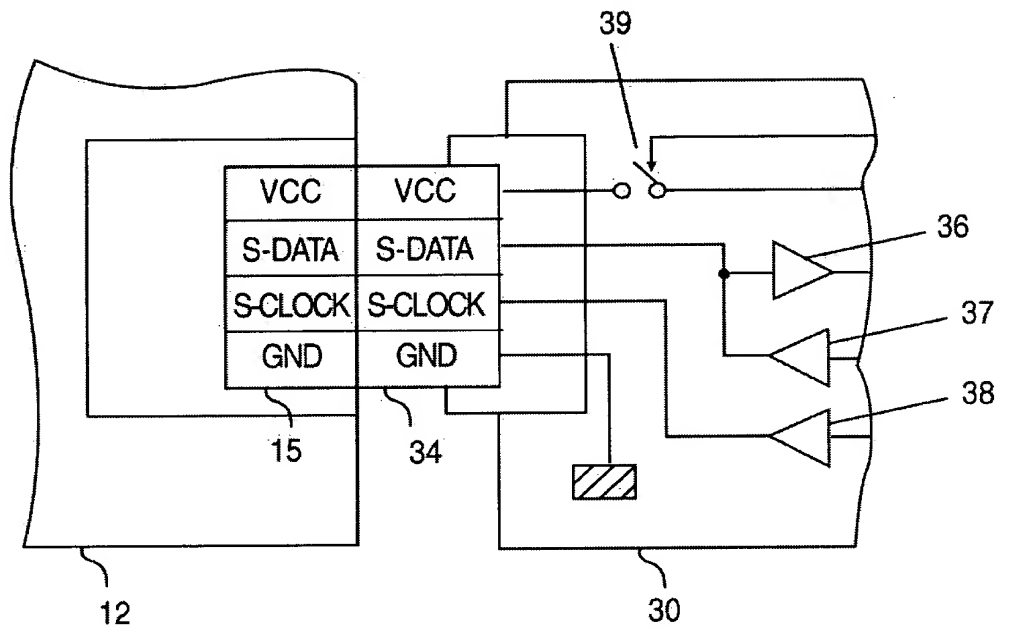


FIG. 4



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

5/33

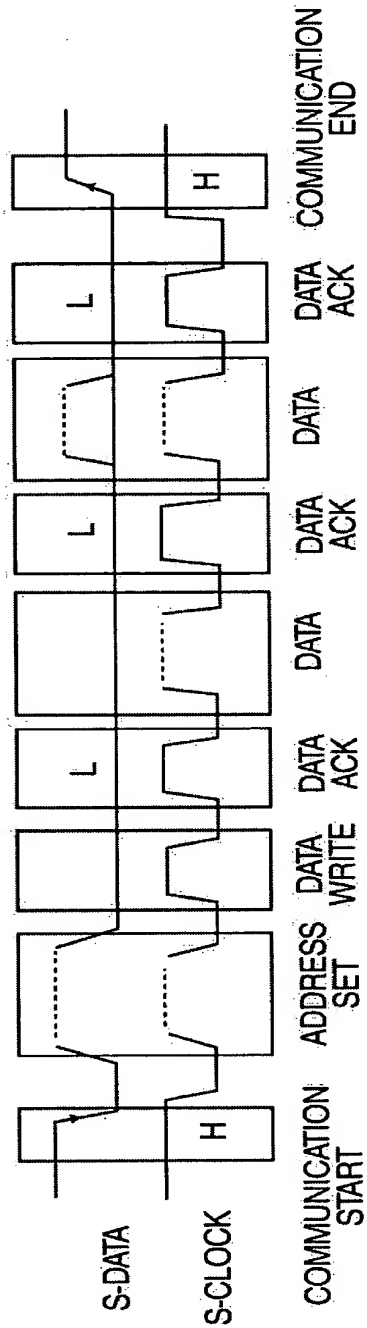


FIG. 5



Inventor(s): Akira TAKANO  
Invention: Method of Generating Index ... Data  
Serial No.: 09/125,102

6/33

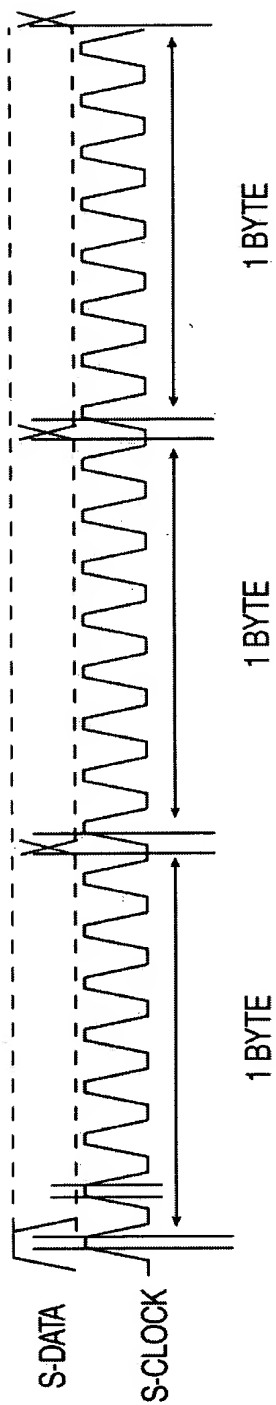


FIG. 6

**Inventor(s):** Akira TAKANO

**Invention:** Method of Generating Index ... Data

**Serial No.:** 09/125,102



7/33

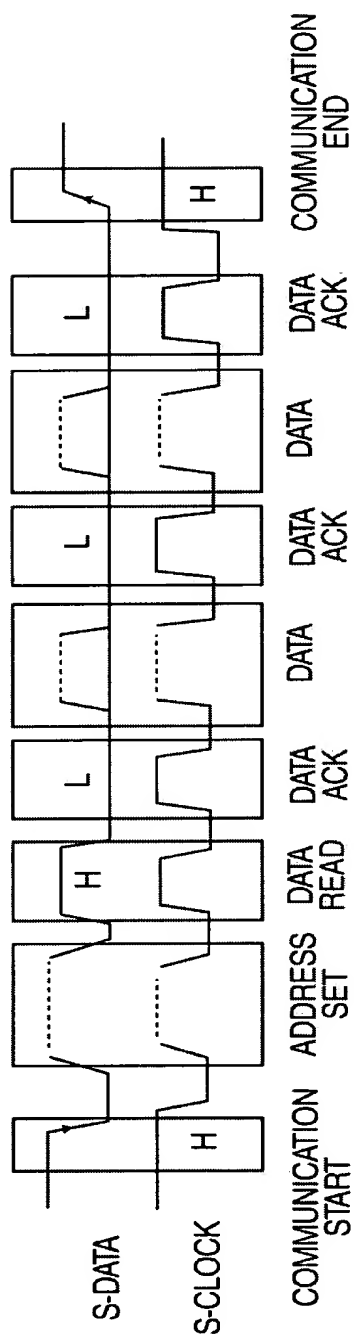


FIG. 7



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

8/33

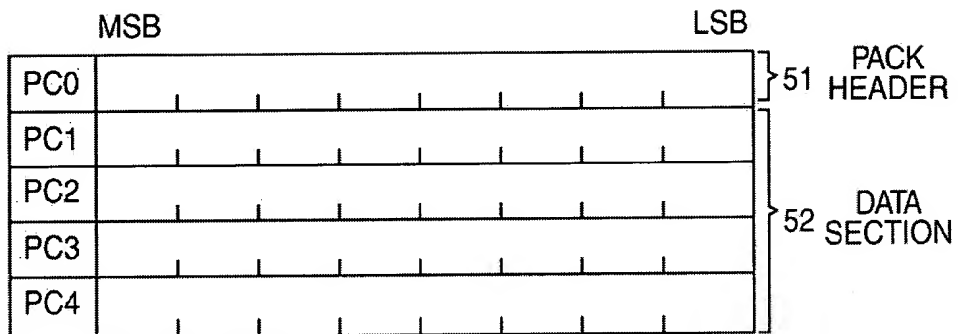


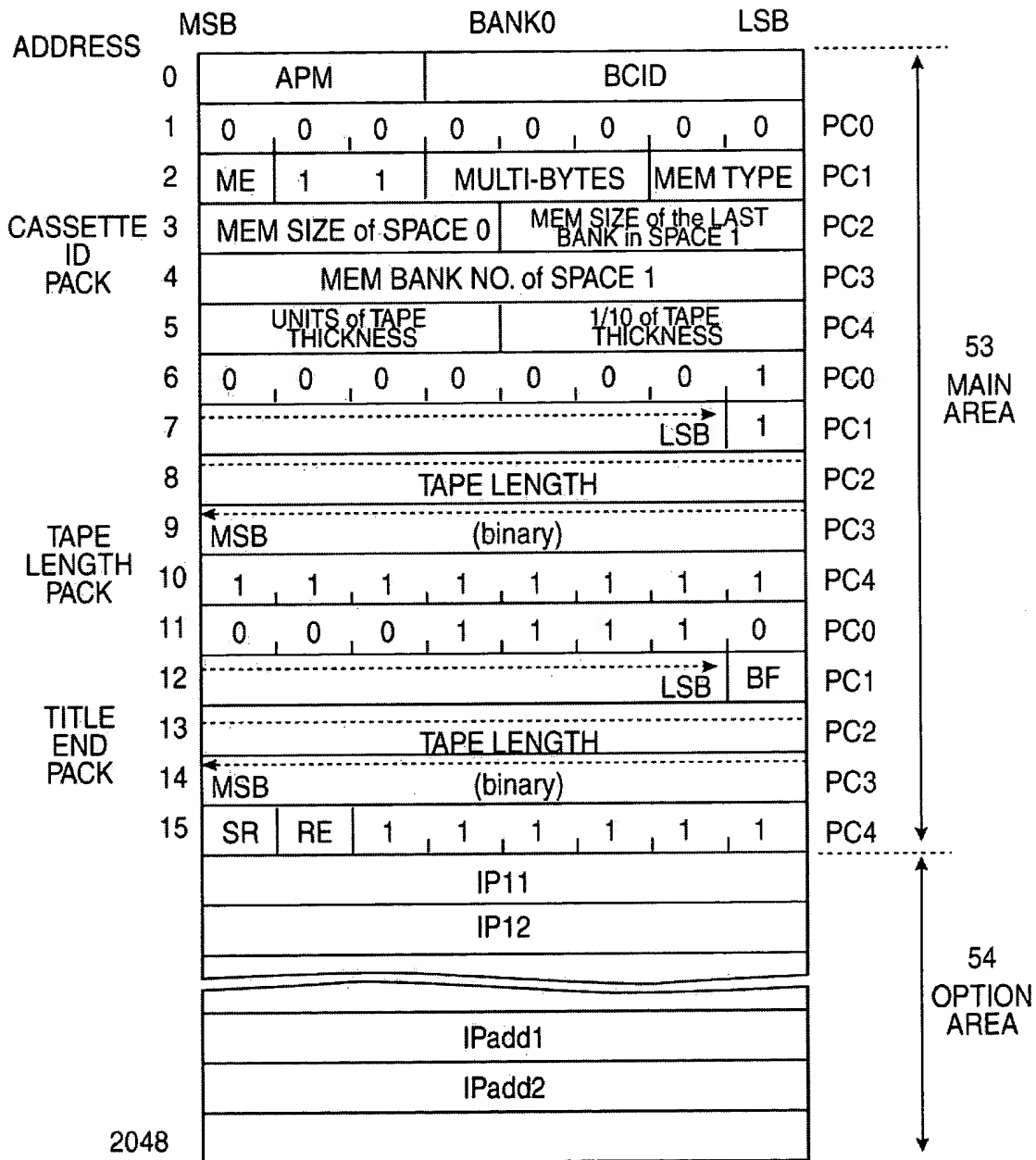
FIG. 8



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

9/33

FIG. 9





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

10/33

FIG. 10

FB								} 51
MARK-OUT POINT RELATIVE VALUE								
SCENE NUMBER								} 52
b0	OK	TAKE NUMBER						
b1	b2							

FIG. 11

FB			} 51
		MARK-OUT POINT RELATIVE VALUE	
	SECOND		} 52
b0	MINUTE		
b1	b2	HOUR	

FIG. 12

FB			} 51
		FRAME	
	SECOND		} 52
b0	MINUTE		
b1	b2	HOUR	

FIG. 13

FB			} 51
		FRAME	
	SECOND		} 52
b0	MINUTE		
b1	b2	HOUR	



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

11/33

FIG. 14

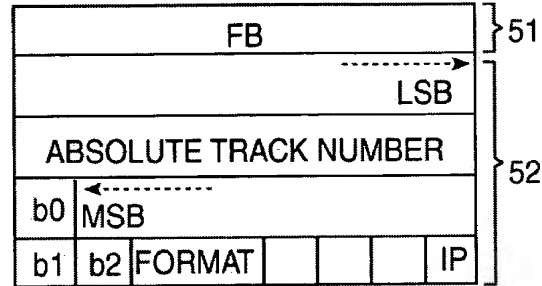


FIG. 15

	MSB								LSB
PC0	1	1	1	1	1	0	1	1	
PC1	-----< MARK-OUT POINT -----> RELATIVE VALUE TO PC1 OF IPN2								
PC2	-----< SCENE NUMBER ----->								LSB
PC3	0	OK/NG	TAKE NUMBER					MSB	
PC4	1	0	1	1	1	1	1	1	

FIG. 16

	MSB								LSB
PC0	1	1	1	1	1	0	1	1	
PC1	-----< MARK-OUT POINT -----> RELATIVE VALUE TO PC1 OF IPN1 LSB								
PC2		TENS of SECONDS				UNITS of SECONDS			
PC3	1	TENS of MINUTES				UNITS of MINUTES			
PC4	1	0	TENS of HOURS				UNITS of HOURS		



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

12/33

FIG. 17

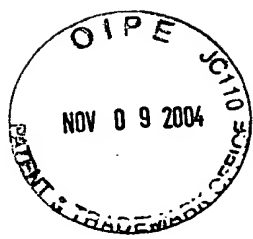
	MSB								LSB
PC0	1	1	1	1	1	0	1	1	
PC1	1	1	TENS of FRAMES			UNITS of FRAMES			
PC2	1	TENS of SECONDS			UNITS of SECONDS				
PC3	0	TENS of MINUTES			UNITS of MINUTES				
PC4	0	1	TENS of HOURS			UNITS of HOURS			

FIG. 18

MSB										LSB									
PC0	1	1	1	1	1	0	1	1											
PC1		1	TENS of FRAMES				UNITS of FRAMES												
PC2		TENS of SECONDS				UNITS of SECONDS													
PC3	0	TENS of MINUTES				UNITS of MINUTES													
PC4	0	1	TENS of HOURS				UNITS of HOURS												

FIG. 19

	MSB								LSB
PC0	1	1	1	1	1	0	1	1	
PC1									LSB
PC2	ABSOLUTE TRACK NUMBER								
PC3	1	MSB							
PC4	0	0	FORMAT		1	1	1	1	P



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

13/33

FIG. 20

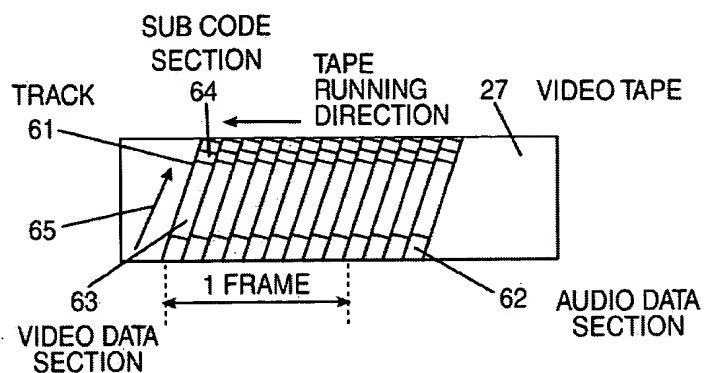


FIG. 21

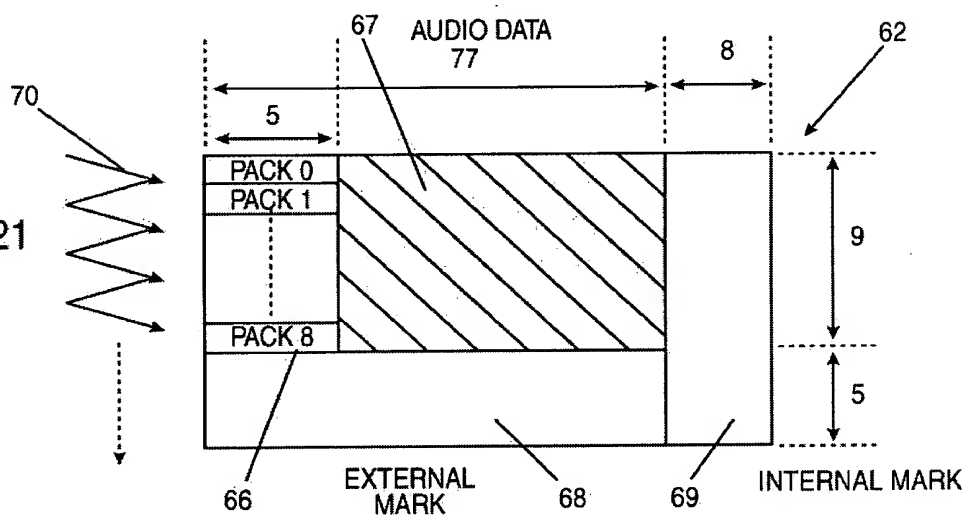
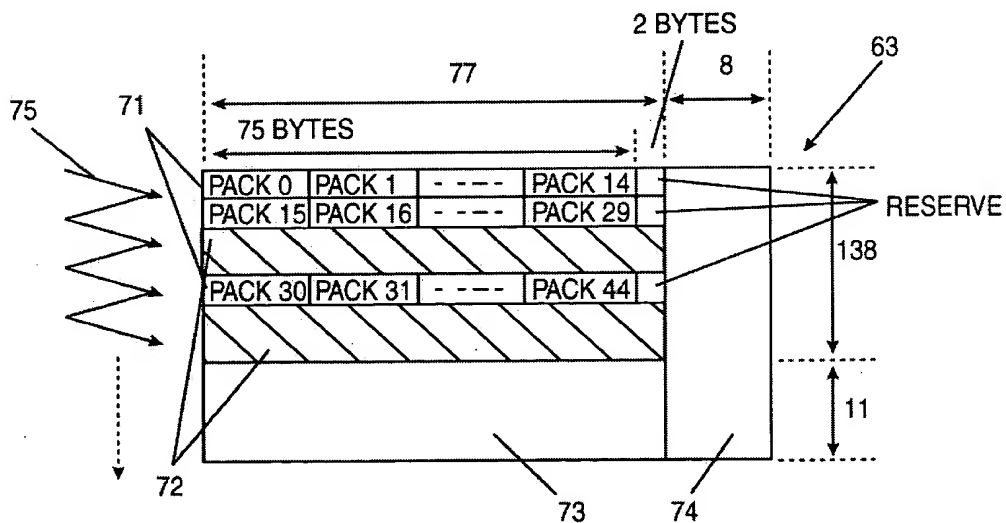


FIG. 22





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

14/33

FIG. 23

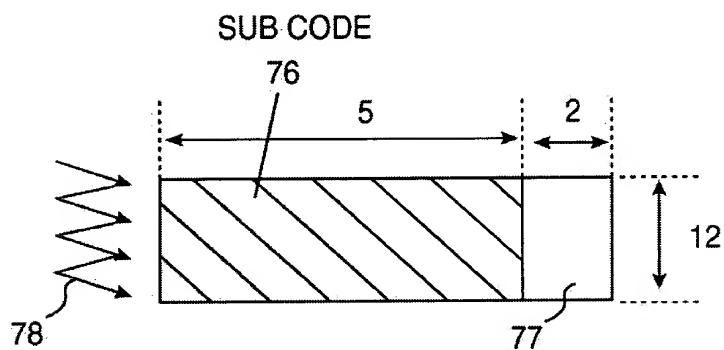
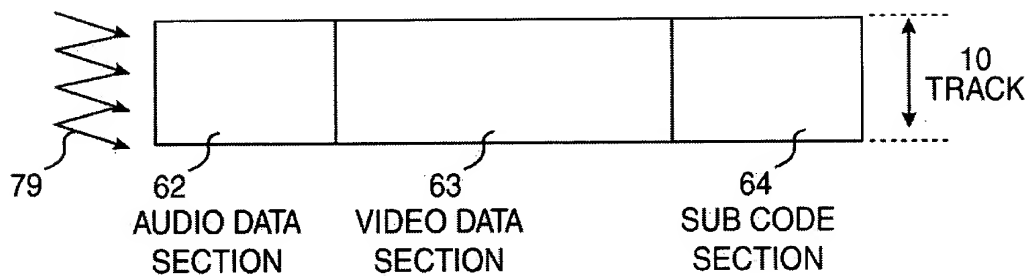


FIG. 24





**Inventor(s):** Akira TAKANO

**Invention:** Method of Generating Index ... Data

**Serial No.:** 09/125,102

15/33

FIG. 25

MSB		ID0	LSB	MSB	ID1	LSB	DATA
FR						SB, NO.	SUB CODE DATA
1	AP3	ABSOLUTE TRACK NO.				0	FB (1Padd1)
1	TAG					1	FB (1Padd2)
1	TAG					2	FB (CUE)
1	TAG	ABSOLUTE TRACK NO.				3	TTC
1	TAG					4	TTC or BIN or NO INFO
1	TAG					5	TTC
1	AP3	ABSOLUTE TRACK NO.				6	FB (IPn1)
1	TAG					7	FB (IPn2)
1	TAG					8	
1	TAG	ABSOLUTE TRACK NO.				9	TTC
1	TAG					10	TTC or BIN or NO INFO
1	APT					11	TTC



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

16/33

FIG. 26

MSB		ID0	LSB	MSB	ID1	LSB	DATA
FR						SB NO.	SUB CODE DATA
0	AP3	ABSOLUTE TRACK NO.				0	FO (PM)
0	TAG					1	FB (R1)
0	TAG					2	FB (R2)
0	TAG	ABSOLUTE TRACK NO.				3	TTC
0	TAG					4	REC DATE or NO INFO
0	TAG					5	REC TIME or NO INFO
0	AP3	ABSOLUTE TRACK NO.				6	RESERVE
0	TAG					7	RESERVE
0	TAG					8	RESERVE
0	TAG	ABSOLUTE TRACK NO.				9	TTC
0	TAG					10	REC DATE or NO INFO
0	APT					11	REC TIME or NO INFO



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

17/33

FIG. 27a

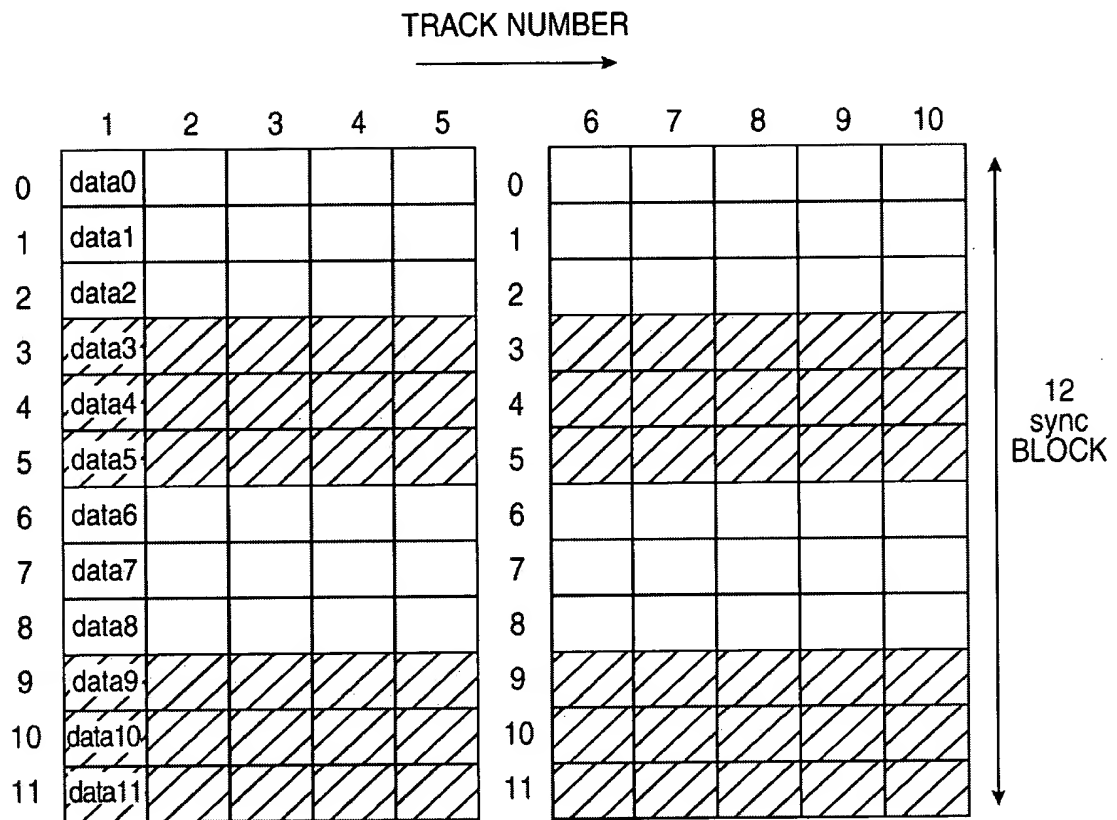
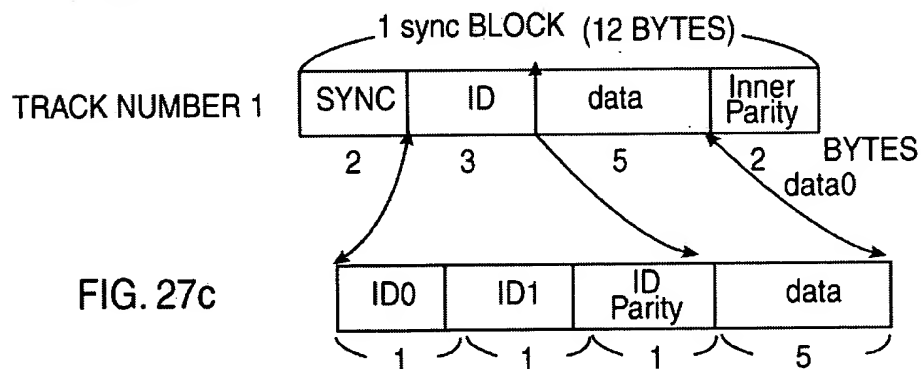


FIG. 27b





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

18/33

FIG. 28

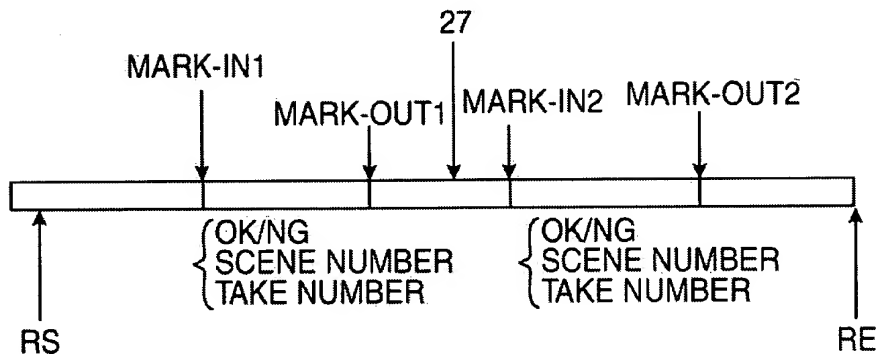


FIG. 29

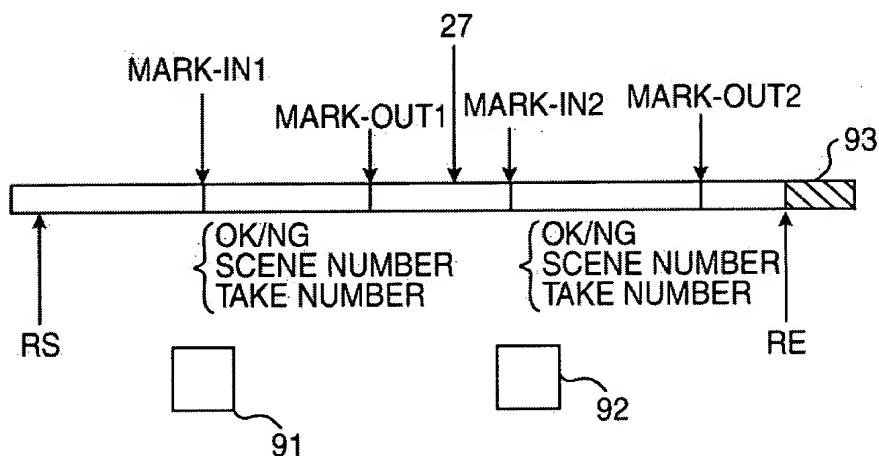
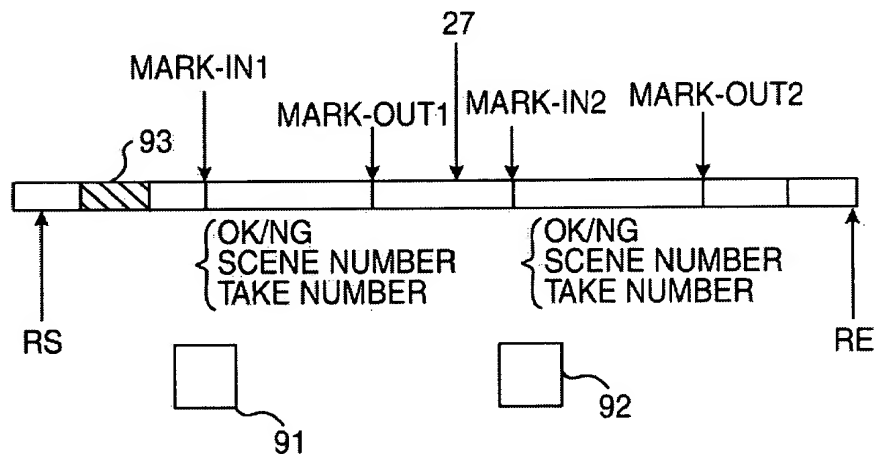


FIG. 30





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

19/33

FIG. 31

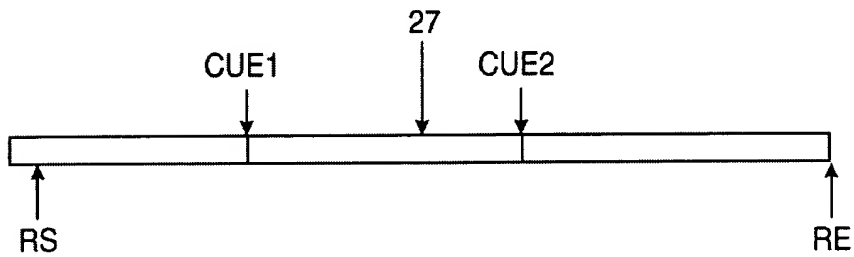


FIG. 32

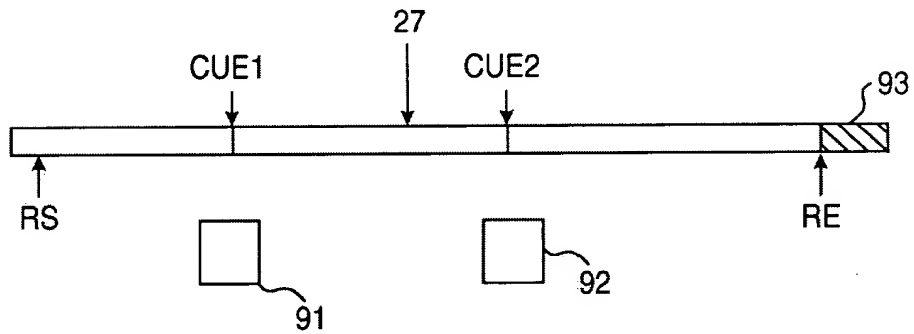
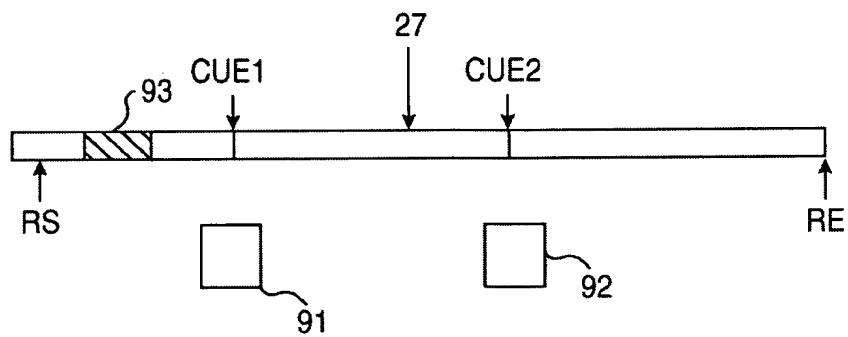


FIG. 33





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

20/33

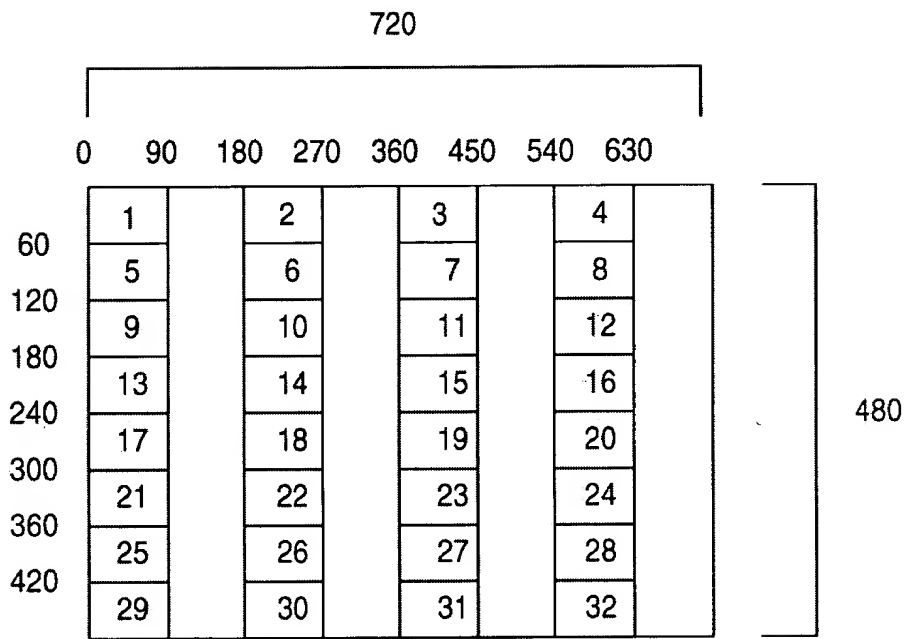


FIG. 34



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

21/33

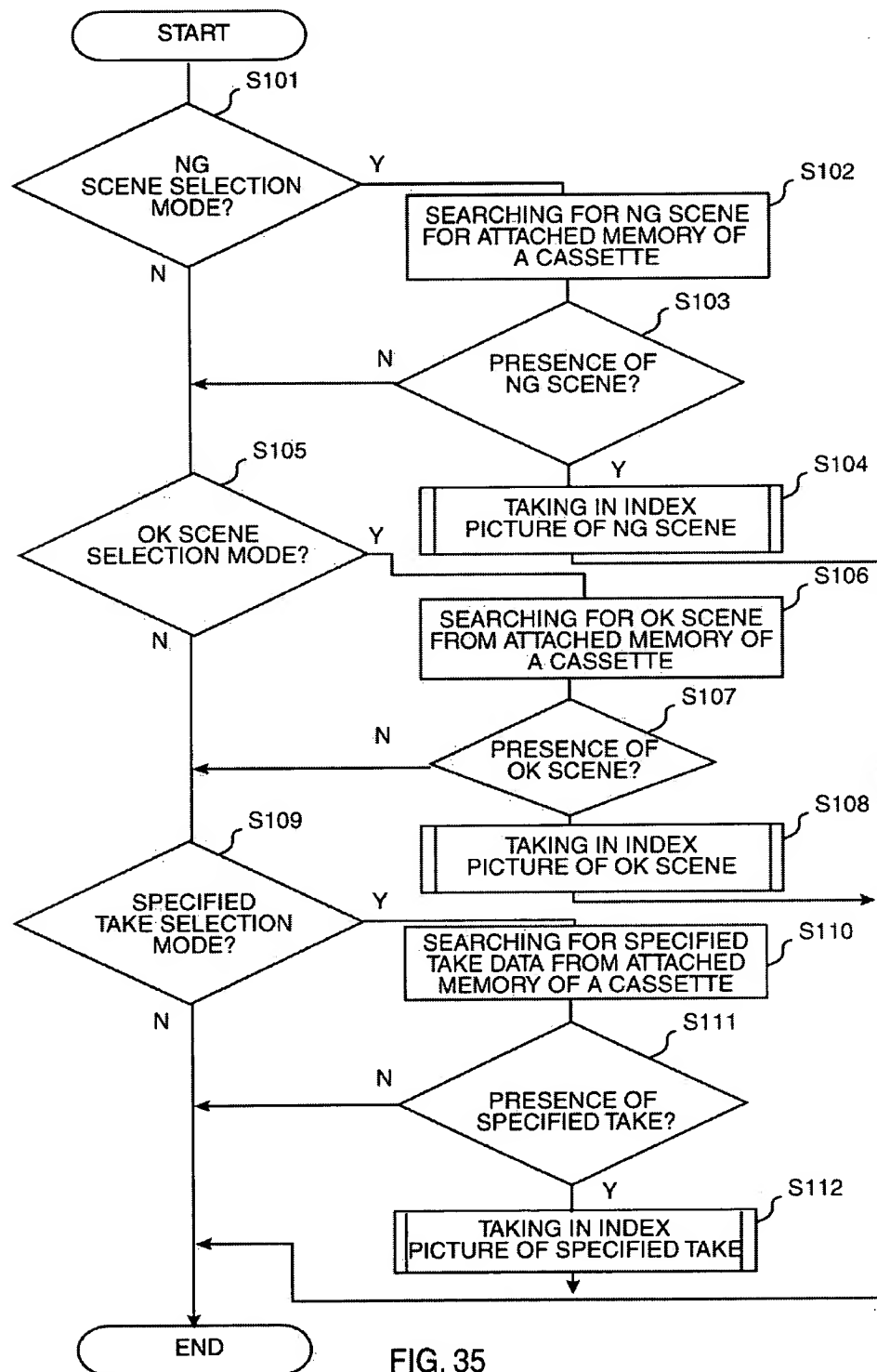


FIG. 35



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

22/33

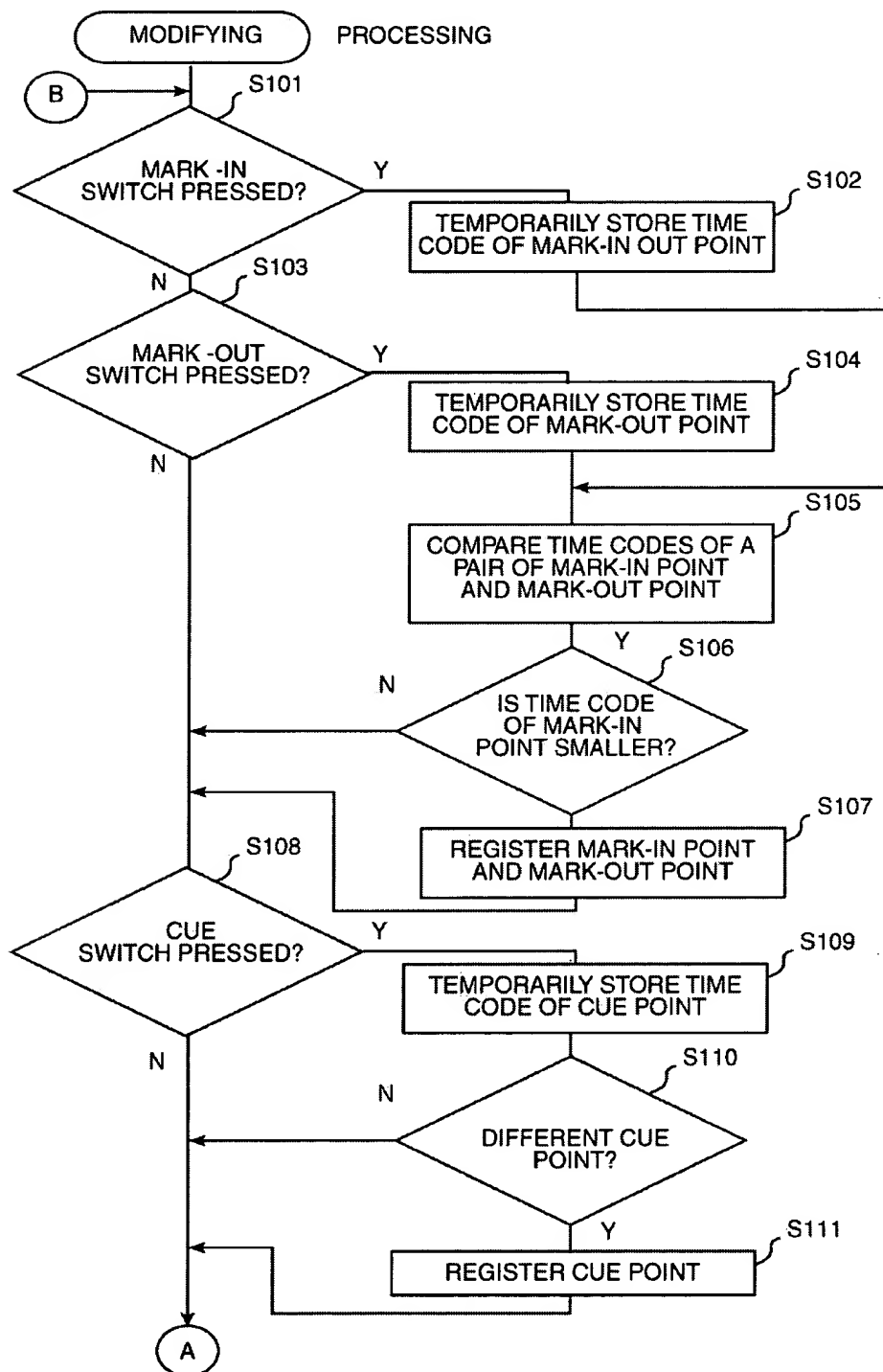


FIG. 36



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

23/33

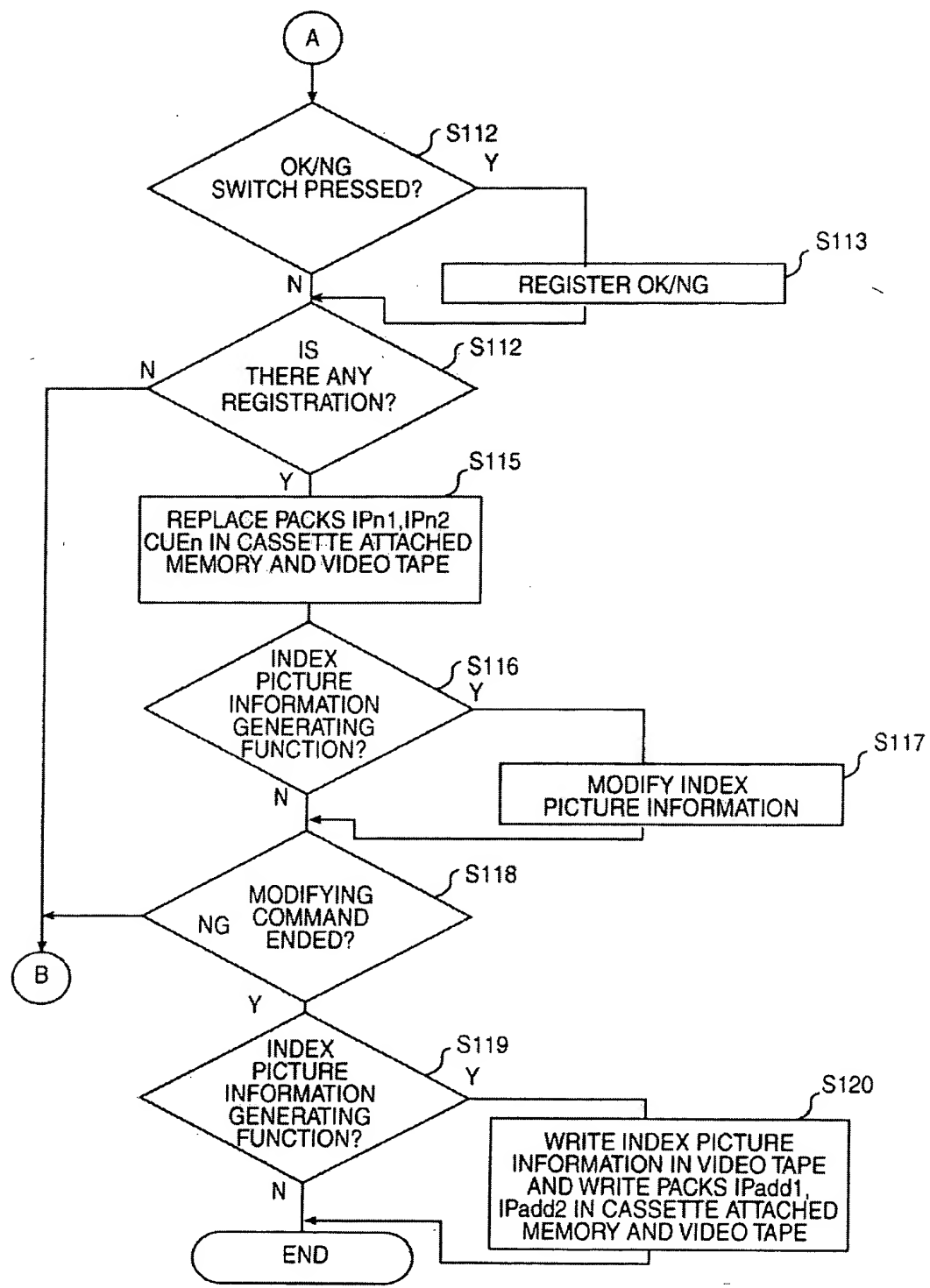


FIG. 37



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

24/33

FIG. 38

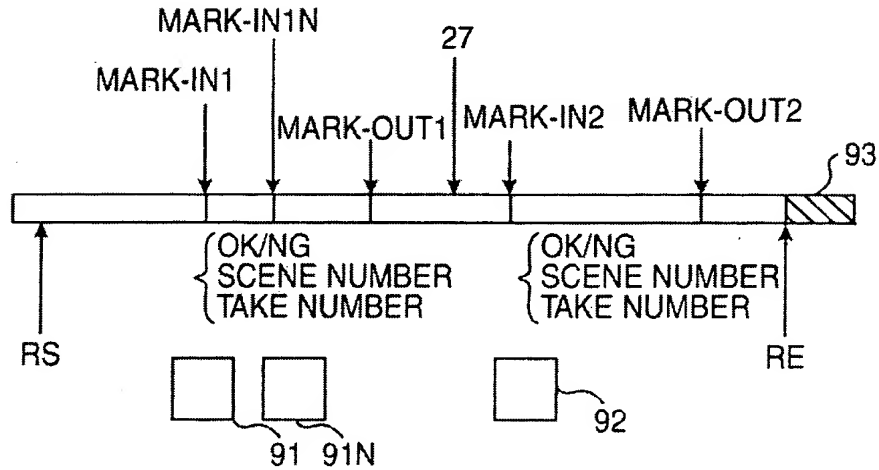


FIG. 39a

MAIN AREA
IP <sub>11</sub> (MARK-IN1)
IP <sub>12</sub> (MARK-IN1)
IP <sub>21</sub> (MARK-IN2)
IP <sub>22</sub> (MARK-IN2)
⋮
IPadd1
IPadd2

FIG. 39b

MAIN AREA
IP <sub>11</sub> (MARK-IN1N)
IP <sub>12</sub> (MARK-IN1N)
IP <sub>21</sub> (MARK-IN2)
IP <sub>22</sub> (MARK-IN2)
⋮
IPadd1
IPadd2



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

25/33

FIG. 40a

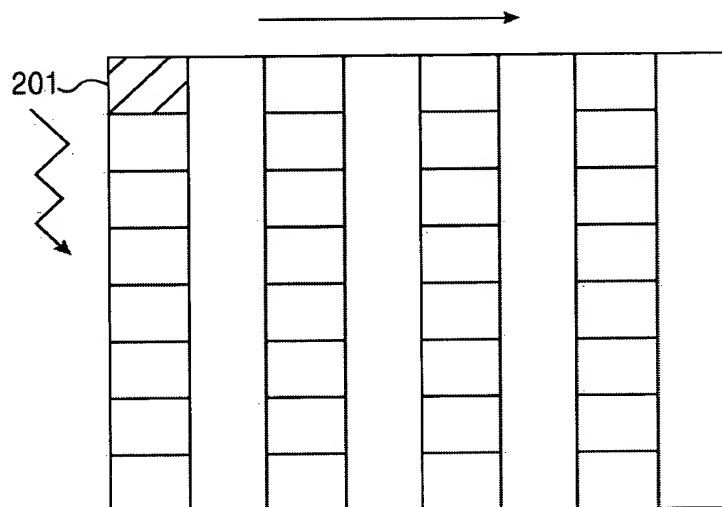
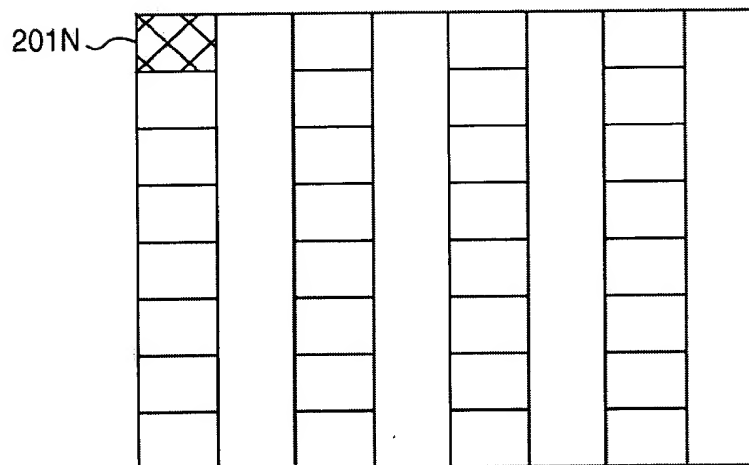


FIG. 40b





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

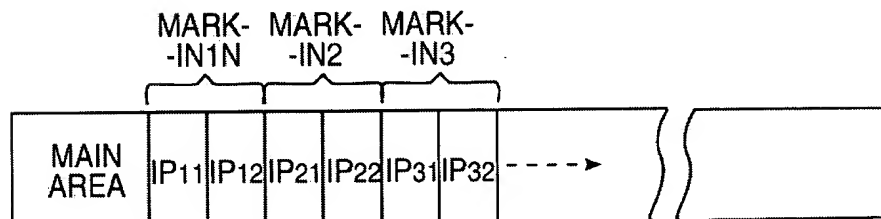
26/33

FIG. 41a

201N

1		2		3		4	
5		6		7		8	
9		10		11		12	
13		14		15		16	
17		18		19		20	
21		22		23		24	
25		26		27		28	
29		30		31		32	

FIG. 41b





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

27/33

FIG. 42

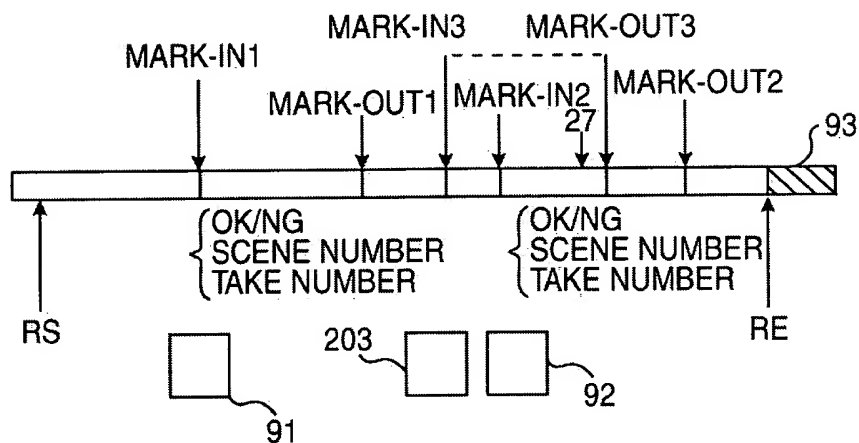


FIG. 43a

MAIN AREA
IP <sub>11</sub> (MARK-IN1)
IP <sub>12</sub> (MARK-IN1)
IP <sub>21</sub> (MARK-IN2)
IP <sub>21</sub> (MARK-IN2)
⋮
⋮
⋮
⋮
IPadd1
IPadd2

FIG. 43b

MAIN AREA
IP <sub>11</sub> (MARK-IN1)
IP <sub>12</sub> (MARK-IN1)
IP <sub>21</sub> (MARK-IN3)
IP <sub>22</sub> (MARK-IN3)
IP <sub>31</sub> (MARK-IN2)
IP <sub>32</sub> (MARK-IN2)
⋮
⋮
IPadd1
IPadd2



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

28/33

FIG. 44a

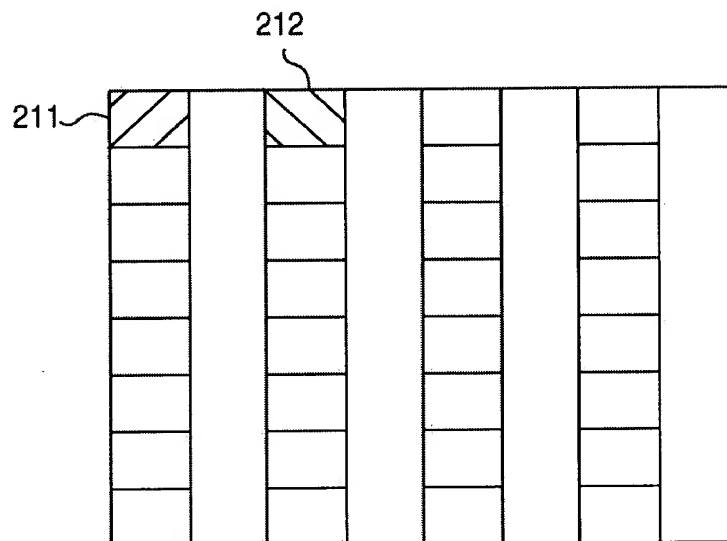
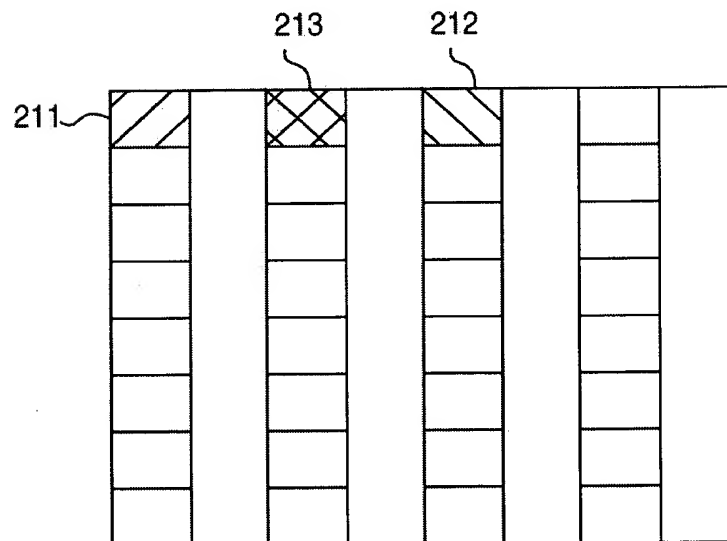


FIG. 44b





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

29/33

FIG. 45a

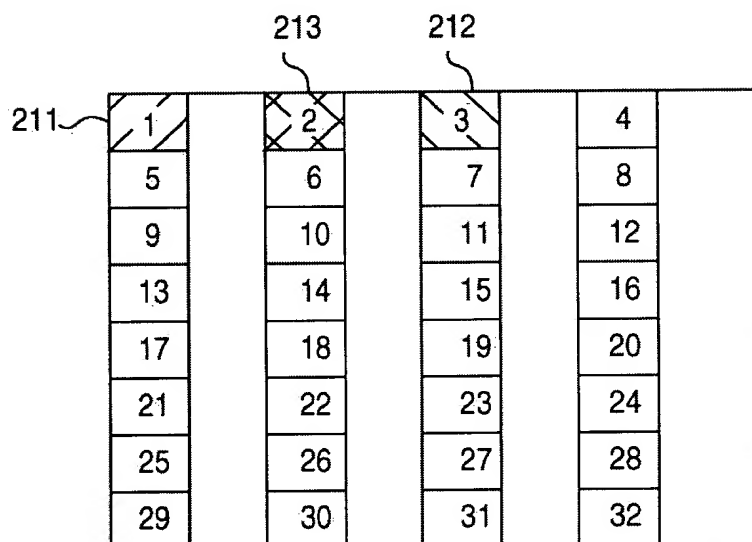
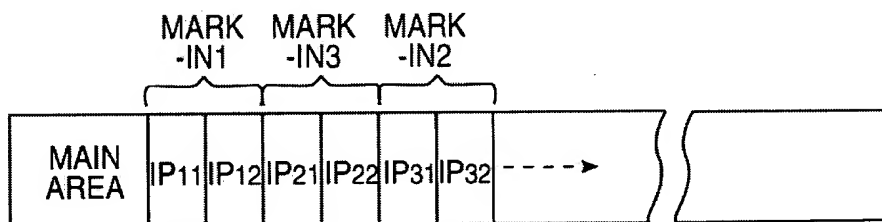


FIG. 45b





**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

30/33

FIG. 46

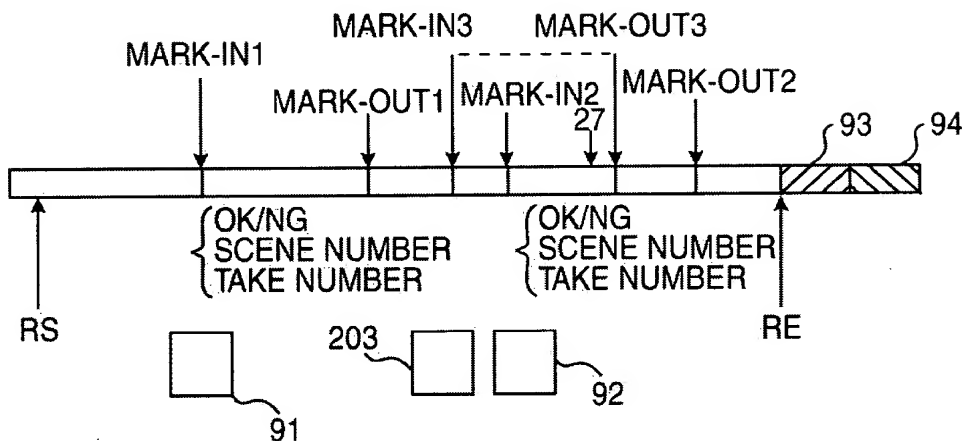


FIG. 47a

MAIN AREA
IP11(MARK-IN1)
IP12(MARK-IN1)
IP21(MARK-IN2)
IP21(MARK-IN2)
⋮
⋮
⋮
⋮
IPadd1(VALID)
IPadd2(VALID)

FIG. 47b

MAIN AREA
IP11(MARK-IN1)
IP12(MARK-IN1)
IP21(MARK-IN3)
IP22(MARK-IN3)
IP31(MARK-IN2)
IP32(MARK-IN2)
⋮
⋮
IPadd1(VOID)
IPadd2(VOID)
IPadd1N(VOID)
IPadd2N(VOID)



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

31/33

FIG. 48

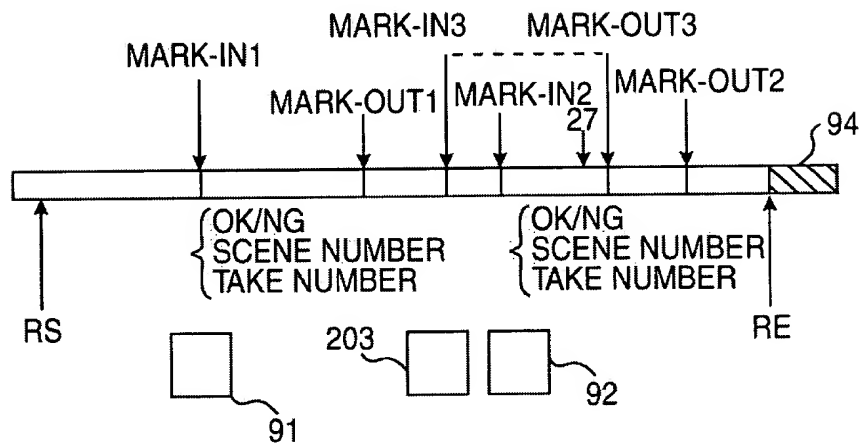


FIG. 49a

MAIN AREA
IP <sub>11</sub> (MARK-IN1)
IP <sub>12</sub> (MARK-IN1)
IP <sub>21</sub> (MARK-IN2)
IP <sub>21</sub> (MARK-IN2)
⋮
IPadd1
IPadd2

FIG. 49b

MAIN AREA
IP <sub>11</sub> (MARK-IN1)
IP <sub>12</sub> (MARK-IN1)
IP <sub>21</sub> (MARK-IN3)
IP <sub>22</sub> (MARK-IN3)
IP <sub>31</sub> (MARK-IN2)
IP <sub>32</sub> (MARK-IN2)
⋮
IPadd1N
IPadd2N



**Inventor(s):** Akira TAKANO

**Invention:** Method of Generating Index ... Data

**Serial No.:** 09/125,102

32/33

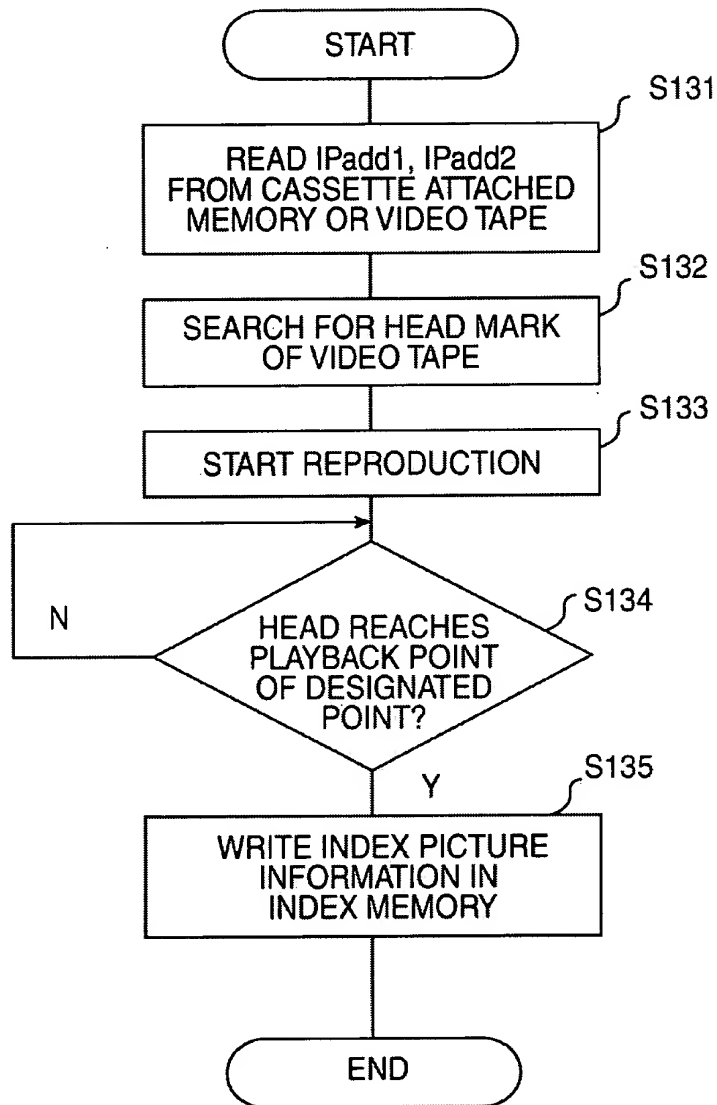


FIG. 50



**Inventor(s):** Akira TAKANO  
**Invention:** Method of Generating Index ... Data  
**Serial No.:** 09/125,102

33/33

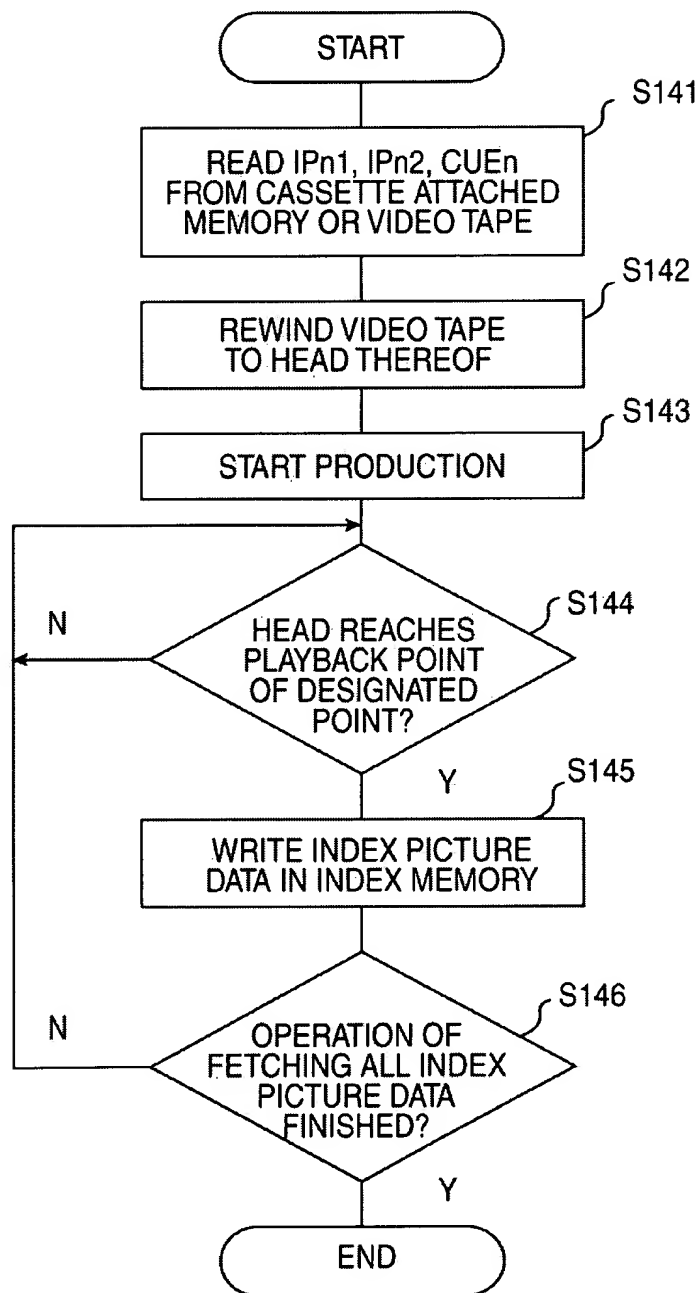


FIG. 51